introduced LTE service in certain regions. Furthermore, Verizon Wireless has announced plans to offer LTE in areas with a combined population of 200 million by mid-2012 and plans to offer LTE through its entire network footprint by the end of 2013.[108]

94. Verizon also continues to benefit from a strong spectrum position and handset portfolio. Verizon Wireless' LTE deployment is based on a nationwide 22 MHz block of 700 MHz spectrum.[109] In contrast, AT&T's LTE deployment will be deployed across blocks of 700 MHz and AWS spectrum, which requires equipping handsets to access both bands, and, as discussed above, in a variety of areas AT&T has little or no 700 MHz or AWS spectrum available for LTE service. With respect to handsets, Verizon Wireless started to offer the iPhone early in 2011 and it also offers a wide range of Android devices.

95. Analysts highlight Verizon Wireless' strong competitive position. JP Morgan, for example, recently concluded that "Verizon is also in a strong position in the wireless space, and postpaid subscriber growth should exceed that of the industry in 2011 due to both its overall network quality and the addition of the iPhone to its handset lineup."[110] JP Morgan also recently projected that Verizon's offering of the iPhone will reduce AT&T's share of industry gross adds from 30.7 percent in 3Q10 to 27.4 percent in 2Q11.[111]

Sprint

96. Sprint is a significant competitive presence estimated to have over 50 million wireless subscribers in the U.S.[112] After a period in which its national subscriber share has declined, Sprint has rapidly added subscribers in the past year. Analysts expect it to continue to grow due in part to resolution of service quality problems resulting in part from its merger with Nextel and to the fact it has

108. Christopher Declaration, ¶30.
109. http://news.vzw.com/news/2008/04/pr2008-04-04.html
110. JP Morgan, "U.S. Telecom Services & Towers", January 13, 2011, p. 7.
111. JP Morgan, "U.S. Telecom Services & Towers", January 13, 2011, p. 35.
112. Based on AT&T estimates for February 2011.

(i) strong spectrum holdings with its majority ownership interest in Clearwire, which has deployed a 4G/WiMax network in many parts of the U.S.; (ii) an attractive device portfolio; and (iii) an aggressive pricing strategy.

97. Traditionally, Sprint has been a supplier of contract services but has increasingly focused on serving non-contract customers, as reflected in its acquisition of the MVNO Virgin Mobile in 2009 and its operation of Boost Mobile, which was part of Sprint's acquisition of Nextel in 2006. Roughly 15 percent of Sprint revenue is from non-contract services.[113]

98. Sprint experienced significant subscriber losses following its merger with Nextel in 2006, which saw its national share decline from 22 percent in 2007 Q3 to 17 percent in 2010 Q3.[114] However, this pattern reversed in 2010, during which Sprint Nextel had a net gain of 1.78 million subscribers.[115] Sprint states that it "achieved its best total company wireless subscriber additions and net postpaid additions since the first and second quarters of 2006, respectively."[116] It further expects "postpaid subscriber net additions for the full year 2011 and to improve total wireless subscriber net additions in 2011, as compared to 2010."[117]

99. Sprint also has a stronger reputation for service quality than AT&T or T-Mobile USA, generally ranking second among national carriers in customer satisfaction behind Verizon Wireless. In January 2011, Sprint ranked third, after Verizon Wireless and U.S. Cellular, in Consumer Reports overall cellular rating.[118] Sprint's monthly churn rate is estimated to be **[Begin Confidential Information]**

113. "Sprint Nextel Reports Fourth Quarter and Full Year 2010 Results," February 10, 2011.
114. UBS, "US Wireless 411," November 16, 2010, p. 13.
115. Sprint earnings press release, http://newsroom.sprint.com/article_display.cfm?article_id=1796.
116. Sprint earnings press release, http://newsroom.sprint.com/article_display.cfm?article_id=1796.
117. Sprint earnings press release, http://newsroom.sprint.com/article_display.cfm?article_id=1796.
118. Consumer Reports website, updated January 2011 (subscription required).

[End Confidential Information] percent, **[Begin Confidential Information]**

[End Confidential Information].[119]

100. Data services account for an estimated 28 percent of Sprint's total revenue.[120] Sprint currently provides 3G EV-DO services throughout its network footprint and is selling WiMax service using the network being deployed by Clearwire, which is 54 percent owned by Sprint.[121] Clearwire has deployed WiMax services in areas that cover 112 million people.[122] Sprint holds a strong spectrum position, including national licences for SMR spectrum (about 19 MHz), plus a nationwide 10 MHz PCS G block license. Sprint also has extensive additional spectrum through its 1900 MHz holdings and its majority interest in Clearwire. Sprint is also recognized as having a strong device portfolio and aggressive pricing.[123]

3. Non-Contract/Unlimited Volume Carriers: MetroPCS and Leap/Cricket

101. Two more recent entrants, MetroPCS and Leap, which operates under the Cricket brand, have grown rapidly in recent years following their role in introducing no-contract, "all you can eat" services. The new business model introduced by these firms differed substantially from that historically used by national carriers.

102. Both firms operate in a variety of regions and have been increasing their national network footprint in recent years. MetroPCS and Leap have largely complementary network footprints and have entered into a reciprocal roaming agreement that contributes to their ability to offer near-nationwide pricing without subscribers facing roaming fees. Leap's network operations are concentrated in the Midwest, South and East, while MetroPCS' network operations are concentrated in

119. See Table 2.
120. See Table 2.
121. Sprint 2010 10-K, p. 13.
122. Clearwire 2010 10-K, pp. 3, 26.
123. JP Morgan, "U.S. Telecom Services & Towers," January 13, 2011, p. 21.

the western and northeastern parts of the US as well as Florida, Michigan and northern Texas.[124] Together, the two firms alone today are estimated to sell service in CMAs covering roughly 203 million people, or roughly two-thirds of the U.S. population.[125]

103. As a result, one analyst notes that the national roaming agreement between MetroPCS and Leap "in essence allows them to form the fifth nationwide carrier."[126] Another analyst similarly notes that "[t]his was an essentially costless network expansion for both, since they both had a similar number of covered POPs with minimal overlap – hence, the cost of accommodating the other's roaming traffic roughly balanced the benefit of being able to double their coverage."[127]

MetroPCS

104. MetroPCS began offering wireless service in 2002 and has since grown to serve approximately 8 million subscribers today.[128] MetroPCS offers services "on a no long-term contract, paid-in-advance, flat-rate, unlimited usage basis."[129] MetroPCS is estimated to currently have subscribers in 88 CMAs accounting for roughly 110 million people and owns spectrum in an additional 159 CMAs accounting for roughly 35 million people.[130] MetroPCS provides service in a number of the nation's largest cities, including New York, Los Angeles, San Francisco, Philadelphia, Boston, Dallas and Miami.[131] It recently launched service in Connecticut.[132] MetroPCS' coverage maps indicate that it is

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124. http://www.mycricket.com/coverage/maps/wireless. MetroPCS 2010 10-K, p. 10.
125. Based on AT&T estimates. Includes CMAs where either firm has at least 0.5% subscriber share.
126. Oppenheimer, "Leap Wireless", February 6, 2009, p. 17.
127. Bernstein, "Leap Wireless and MetroPCS: The Low End is Where the Action Is", April 12, 2010, p. 6.
128. http://investor.metropcs.com/phoenix.zhtml?c=177745&p=irol-irhome
129. MetroPCS 2009 Annual Report, p. 5.
130. Based on AT&T estimates. Subscriber areas include CMAs in which MetroPCS has at least 0.5% of subscribers.
131. Based on AT&T estimates.
132. MetroPCS news release, "MetroPCS Expands Northeast Network Coverage with Launch of Wireless Services in Connecticut," February 1, 2011. MetroPCS' coverage maps also indicate that it is planning to expand service into areas including Phoenix, AZ, Albany, NY and Santa Fe,

planning to expand service into areas including Phoenix, AZ, Albany, NY and Santa Fe, NM.[133] Through a combination of network facilities and roaming agreements, MetroPCS provides and promotes "Nationwider" pricing which covers voice, text and other basic data service for a flat monthly fee without additional roaming fee for calls made in areas that cover roughly 90 percent of the U.S. population.[134]

105. MetroPCS is estimated to have achieved steady growth in a broad geographic range of areas where it has deployed service.[135] MetroPCS is estimated to have approximately a **[Begin Confidential Information]** **[End Confidential Information]** percent subscriber share in major areas where it has offered services for more than three years. In some areas, it has achieved even higher shares. MetroPCS is now estimated to account for over **[Begin Confidential Information]**

[End Confidential Information] ; and is estimated to have in excess of **[Begin Confidential Information]**

[End Confidential Information].[136] Based on these estimates, **[Begin Confidential Information]**

[End Confidential Information].[137]

106. MetroPCS has offered voice, text and other data services over its CDMA network and is now deploying LTE throughout its network footprint.[138] MetroPCS "made the bold business decision to

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133. MetroPCS' coverage maps and customer service representative.
134. http://www.metropcs.com/coverage/. http://www.metropcs.com/plans/metrousa/faq.aspx. http://www.metropcs.com/plans/default.aspx?tab=family.
135. Based on AT&T estimates for October 2008 through February 2011.
136. Based on AT&T estimates for February 2011.
137. Based on AT&T estimates for February 2011.
138. Letter from Carl Northrop, on behalf of MetroPCS, to FCC Chairman Julius Genachowski re GN Docket No. 09-191 (Preserving the Open Internet), WC Docket No. 07-52 (Broadband Industry

bypass a migration to EV-DO [3G CDMA] and to leapfrog from 1xRTT all the way to state-of-the-art fourth generation Long-Term Evolution ("LTE" or "4G LTE") services. Consequently, MetroPCS became the first broadband carrier in the U.S. to launch a commercial 4G LTE service."[139] MetroPCS now offers LTE service in New York, Los Angeles, San Francisco, Dallas/Fort Worth, Detroit, Philadelphia, Boston, Atlanta, Miami, Las Vegas, Sacramento, Jacksonville, Tampa and Orlando.[140] MetroPCS has announced it will have its entire network footprint covered by early 2012.[141]

107. MetroPCS is in the process of repositioning itself from a firm exclusively focusing on low-cost voice services into a firm offering a broader set of voice and LTE-based data services, while remaining committed to various types of "all you can eat" pricing models.[142] For example, Deutsche Bank noted in January 2011 that MetroPCS had recently rolled out new smartphone plans for its 4G network, which Deutsche Bank called "the best value for data at the high-end."[143] Analysts recognize that MetroPCS' LTE offerings are likely to further enhance its competitive position. Guggenheim Securities concludes that MetroPCS' LTE service "will continue to drive subscriber growth, lower churn, and higher ARPU in 2H11, as customers increasingly shift to datacentric rate plans at higher price points."[144]

Practices), February 14, 2011, pp 3-4.

139. Letter from Carl Northrop, on behalf of MetroPCS, to FCC Chairman Julius Genachowski re GN Docket No. 09-191 (Preserving the Open Internet), WC Docket No. 07-52 (Broadband Industry Practices), February 14, 2011, p. 3-4.
140. Letter from Carl Northrop, on behalf of MetroPCS, to FCC Chairman Julius Genachowski re GN Docket No. 09-191 (Preserving the Open Internet), WC Docket No. 07-52 (Broadband Industry Practices), February 14, 2011, p. 2.
141. Transcript of MetroPCS at Raymond James Institutional Investors Conference, March 7, 2011.
142. Letter from Carl Northrop, on behalf of MetroPCS, to FCC Chairman Julius Genachowski re GN Docket No. 09-191 (Preserving the Open Internet), WC Docket No. 07-52 (Broadband Industry Practices), February 14, 2011, p. 2.
143. Deutsche Bank, "Deutsche Bank, "MetroPCS Comm. – Increasing 4Q10 Net Adds on Positive Channel Checks," January 4, 2011, p. 1.
144. Guggenheim Securities, "MetroPCS Communications, Inc.", November 10, 2010, p. 2.

Leap/Cricket

108. Leap Wireless offers service under the Cricket brand name in 35 U.S states and the District of Columbia. Like MetroPCS, Leap focuses on providing no-contract, unlimited services.[145] It holds spectrum in 35 of the 50 largest markets and has announced a variety of potential expansion scenarios.[146] At year end 2010, Leap served 5.5 million subscribers.[147] In December 2010, Leap is estimated to have subscribers in 135 CMAs accounting for 102 million people and has spectrum in an additional 391 CMAs accounting for another 94 million people.[148] Leap is estimated to have achieved a subscriber share of **[Begin Confidential Information]** **[End Confidential Information]** in 26 DMAs including **[Begin Confidential Information]** **[End Confidential Information]**[149] Leap's share of subscribers is estimated to exceed that of **[Begin Confidential Information]** **[End Confidential Information]**. Leap also provides service in other major metropolitan areas, including Portland, San Diego, St. Louis, Milwaukee, Chicago, Washington DC, and Philadelphia.

109. Leap is also competing to attract data-oriented subscribers, and a Leap executive recently noted that "10 percent of Leap's customer base moved to smartphones in the carrier's fourth quarter, and that fully 40 percent of the carrier's new customers choose smartphones [...] Now we're committed to the smartphone category."[150] Leap has announced that it is testing 4G services and that it

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145. Leap 2010 10-K, p. 2.
146. Leap 2010 10-K, p. 3, http://phx.corporate-ir.net/phoenix.zhtml?c=95536&p=irol-homeprofile
147. http://phx.corporate-ir.net/External.File?item=UGFyZW50SUQ9ODI3OTI8Q2hpbGRJRD0tMXxUeXBlPTM=&t=1, http://investing.businessweek.com/research/stocks/snapshot/snapshot.asp?ticker=LEAP:US.
148. Based on AT&T estimates. Areas with subscribers based on areas where Leap has at least 0.5% subscriber share.
149. Based on AT&T estimates.
150. http://www.fiercewireless.com/ctialive/story/leap-plans-wi-fi-only-viewsonic-android-tablet-

recently entered into a 4G roaming agreement with LightSquared that will allow it to offer service beyond its current footprint.[151]

Competitive Position

110. The competitive importance of MetroPCS and Leap is reflected in the adoption by the national carriers of "all you can eat" services of the type pioneered by these firms.[152] Today, "all you can eat" carriers are increasingly successful in attracting subscribers from the national carriers. Deutsche Bank, for example, recently noted that a significant driver of MetroPCS' new customers is an influx of former contract customers from larger carriers: "We believe these consumers, who are typically no longer on contract, are porting their numbers to [MetroPCS] once they recognize the value proposition offered by unlimited month-to-month usage and near-nationwide coverage for an all-in flat rate."[153] Deutsche Bank further noted that MetroPCS "disclosed with its 3Q10 results that 1/3rd of its gross adds were former post-paid subs, and we believe this share could increase as PCS rolls out new attractive handsets."[154]

111. AT&T and T-Mobile USA estimates indicate that, on-net, all-you-can-eat carriers, principally MetroPCS and Leap have, **[Begin Confidential Information]**

[End Confidential Information]. The success of AYCE carriers in achieving a

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more-android-smartphones/2011-03-24.

151. LightSquared Press Release, "Cricket Enters into 4G Roaming Agreement with LightSquared" March 22, 2011.

152. The FCC states that national carriers first introduced "all you can eat" plans in 2007, noting that "number of smaller and regional carriers, like Leap and MetroPCS, have been offering unlimited local calling plans for years." Annual Report and Analysis of Competitive Market Conditions with Respect to Commercial Mobile Services, Twelfth Report, FCC 08-28, ¶113.

153. Deutsche Bank, "MetroPCS Comm, Increasing 4Q10 Net Adds on Positive Channel Checks," January 4, 2011, p. 5.

154. Deutsche Bank, "MetroPCS Comm. – Increasing 4Q10 Net Adds on Positive Channel Checks," January 4, 2011, p. 1.

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[End Confidential Information].

4. Multi-Area and Regional Competitors

U.S. Cellular

112. U.S. Cellular offers service in 26 states, and had 6.1 million subscribers at year end 2010.[155] Unlike MetroPCS and Leap, 95 percent of U.S. Cellular's subscribers are contract customers.[156] US Cellular has its **[Begin Confidential Information]**

[End Confidential Information]. Major DMAs served by U.S. Cellular include Madison, WI; Milwaukee, WI; Chicago, IL; Oklahoma City, OK; and St. Louis, MO.[157]

113. U.S. Cellular provides EV-DO coverage over 98 percent of its subscriber footprint.[158] In November 2010, U.S. Cellular announced that it would launch an LTE test market in late 2011 and is planning for full-scale deployment in 2012.[159] Like MetroPCS and Leap, U.S. Cellular plans provide subscribers with near-nationwide pricing without facing additional roaming fees.[160]

Cellular South

114. Cellular South, Inc. is a facilities-based wireless carrier offering service in the southeastern part of the United States.[161] Cellular South serves roughly 880,000 subscribers[162] and

155. U.S. Cellular 2010 Annual Report, p. 1.
156. U.S. Cellular 2009 Annual Report, p. 1.
157. Based on AT&T estimates.
158. U.S. Cellular 2010 10-K, p. 6. Data are as of the end of 2010.
159. http://www.fiercewireless.com/story/us-cellular-plans-lte-test-vendor-selection-next-year/2010-11-10
160. http://www.uscellular.com/uscellular/plans/showPlanDetails.jsp?productId=prod10030
161. FCC, 14th CMRS Report, ¶29.
162. Petition to Deny of Cellular South, Inc., in re Application of AT&T Mobility Spectrum LLC and Qualcomm Incorporated for Consent to Assign Eleven Lower 700 MHz Band Licenses, FCC DA 11-252 WT Docket No. 11-18, p. 1.

operates a CDMA based network.[163] It has announced plans to deploy LTE services launching in 4Q 2011.[164] In 2008, the company purchased 700 MHz licenses for $192 million that will allow it to cover virtually all of Mississippi and Tennessee and most of Alabama.[165] Cellular South has announced plans on using this spectrum to develop LTE technology in the future, launching service in 4Q 2011.[166] Cellular South, like the other carriers discussed, offers national calling.[167]

Others

115. Other regional carriers include Cincinnati Bell, which operates in the Cincinnati and Dayton Ohio areas and is estimated to serve more than 500,000 subscribers; Atlantic Tele-Network, which includes assets acquired from former ALLTEL properties, serves roughly 700,000 subscribers in 6 states and offers wholesale services in 14 states; and nTelos which serves roughly 430,000 subscribers in Virginia, West Virginia and neighboring states.[168] Each of these firms offers near-nationwide pricing plans in which subscribers do not pay roaming charges for most calls made outside the carriers' service area.[169]

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163. http://www.cellularsouth.com/aboutus/History-Timeline.html
164. http://www.cellularsouth.com/aboutus/index.html. "Cellular South announces strategic alliance with Samsung Telecommunications to build LTE 4G high-speed wireless broadband data network infrastructure", undated, company news release.
165. http://www.cellularsouth.com/aboutus/index.html
166. http://www.cellularsouth.com/aboutus/index.html. "Cellular South announces strategic alliance with Samsung Telecommunications to build LTE 4G high-speed wireless broadband data network infrastructure", undated, company news release.
167. https://www.cellularsouth.com/cscommerce/products/plans/product_plan_details.jsp?id=prod23120023#disclaimer_info
168. Based on AT&T estimates. Atlantic Tele-Network 2010 10-K, pp. 3-4.
169. nTelos offers its nationwide calling to its contract and some non-contract customers, through a wholesale agreement with Sprint, as well as offering local plans. (nTelos 2010 10K, pp. 5-6). Cincinnati Bell offers nationwide pricing for contract customers. (Conversation with Cincinnati Bell customer service representative, April 13, 2011). Atlantic Tele-Networks offers near-nationwide coverage through reciprocal roaming arrangements with other wireless carriers. (Atlantic Tele-Networks 2010 10K, p. 4).

5. LightSquared, Clearwire and future entrants

116. LightSquared is entering into the provision of wireless service with a "greenfield" network deploying a near-national LTE network which it plans to use as a wholesale supplier to MVNOs and other carriers wishing to expand their LTE network footprint.[170] Like newer firms such as MetroPCS and future entrants, LightSquared has the ability to "leapfrog" carriers, which must continue to serve incumbent subscribers using "last generation" technologies.

117. LightSquared holds licenses nationwide for 59 MHz of spectrum in the MSS/ATC (1.6 GHz) band.[171] It is currently constructing a national LTE network and has announced that its network will consist of at least 40,000 cell sites covering approximately 260 million people by 2015, more than 80 percent of the U.S. population.[172] LightSquared is currently "conducting LTE trials in Baltimore, Denver, Las Vegas and Phoenix, with commercial launches planned by the third quarter of this year."[173] It has secured $14 billion over the next 8 years to finance construction of its network.[174]

118. LightSquared recently entered into an agreement that allows Leap to have LTE roaming on LightSquared's service, and has also entered into a deal that allows Best Buy to sell LightSquared's network as a Mobile Virtual Network Operator (MVNO).[175] LightSquared's CEO has stated that "LightSquared's wholesale economic model opens up the service to companies who never thought

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170. "LightSquared - Nationwide LTE Broadband Network", available at http://www.lightsquared.com/what-we-do/network/.
171. http://www.fiercewireless.com/ctialive/story/lightsquared-inks-wholesale-lte-deal-leap-wireless/2011-03-22?utm_medium=nl&utm_source=internal
172. "LightSquared - Nationwide LTE Broadband Network", available at http://www.lightsquared.com/what-we-do/network/ Population coverage is calculated based on current U.S. population of 311 million people, per the U.S. Census Bureau's Population Clock. http://www.census.gov/main/www/popclock.html.
173. http://fiercewireless.com/story/report-lightsquared-contemplates-ipo-summer/2011-04-12
174. http://www.lightsquared.com/press-room/press-releases/lightsquared-announces-additional-financing/. http://reviews.cnet.com/8301-12261_7-20046208-10356022.html.
175. http://www.lightreading.com/document.asp?doc_id=205971&f_src=lightreading_gnews

about offering wireless before."[176] He also stated that LightSquared is talking to many potential wholesale customers including Time Warner Cable "and 15 of those are at a stage where we are negotiating contracts with our customers."[177]

119. Clearwire has deployed a WiMax network covering 112 million people, including major metropolitan areas such as Atlanta, Boston, Chicago, Dallas, Houston, Los Angeles, New York, San Francisco and Washington, D.C.[178] Clearwire uses WiMax technology to offer portable wireless broadband data services that are typically accessed by connected devices and data cards. Clearwire also offers voice services using voice-over-Internet-Protocol (VoIP) technology over its WiMax network. Clearwire sells its service on a retail basis under the "Clear" brand and also provides wholesale services to Sprint and other carriers.

120. LightSquared, Clearwire and entrants that hold unused spectrum -- including SpectrumCo, which is owned by major cable MSOs Comcast, Time Warner and Brighthouse, [179] or cable companies such as Cox operating independently -- have the ability to "leapfrog" existing carriers by deploying the most current technology thus avoiding problems faced by incumbent carriers that must continue to dedicate assets and spectrum to existing subscribers using "last generation" technology. Similarly, future competitors will be able to deploy whatever "next generation" technology is available when the FCC auctions additional spectrum for wireless use.

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176. Dow Jones News Service, "LightSquared Signs Best Buy to Wholesale Wireless Agreement", March 23, 2011.
177. http://www.rethink-wireless.com/2011/04/13/lightsquared-considering-ipo-summer-reports.htm; http://mcommerce.roamdata.com/?p=44471.
178. Clearwire 2010 10-K, pp. 2, 8.
179. http://www.dailywireless.org/2007/08/01/sprint-exits-spectrumco/

C. T-MOBILE USA'S COMPETITIVE SIGNIFICANCE WILL LIKELY DECLINE IN THE ABSENCE OF THE PROPOSED TRANSACTION

121. T-Mobile USA is the fourth largest carrier nationally, serving roughly 34 million subscribers, or about 11 percent of national subscribers.[180] Available data indicate, and analysts recognize, that T-Mobile USA is likely to become a less significant competitor in the future in the absence of the proposed transaction.

122. T-Mobile USA's monthly churn rate is **[Begin Confidential Information] [End Confidential Information]** than that of all other carriers for both contract and non-contract services. As shown in Table 2, T-Mobile USA's churn among contract customers in 4Q 2010 was **[Begin Confidential Information] [End Confidential Information]** percent, while AT&T's was **[Begin Confidential Information] [End Confidential Information]** percent; T-Mobile USA's churn among non-contract customers was **[Begin Confidential Information] [End Confidential Information]** percent, while AT&T's was **[Begin Confidential Information] [End Confidential Information]** percent. Overall, monthly churn among T-Mobile USA customers was **[Begin Confidential Information] [End Confidential Information]** percent, **[Begin Confidential Information] [End Confidential Information]** that for MetroPCS, which exclusively serves non-contract customers.[181] Consumer surveys show that T-Mobile USA subscribers report overall satisfaction ratings below those reported for Verizon Wireless and Sprint.

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180. "T-Mobile USA Reports Fourth Quarter 2010 Results," February 25, 2011.

181. Analysts also note T-Mobile USA's higher churn rates. Current Analysis estimated in January 2018 that "T-Mobile's high total churn, 3.4% at the end of Q3 2010[,] is significantly higher when compared to national carriers such as Verizon Wireless and AT&T. This can be attributed to its customer base, which is more value oriented and now overwhelmingly skewed toward prepaid for net additions." Current Analysis, "Company Assessment: T-Mobile USA," January 18, 2011, p. 5.

123. Traditionally, T-Mobile USA has primarily provided contract services but, like Sprint, Metro PCS and Leap, has increasingly focused on non-contract services. For example, **[Begin Confidential Information]**

[End Confidential Information].[182]

124. T-Mobile USA's share of subscribers and revenue from enterprise customers is smaller than its aggregate share. AT&T data indicate that T-Mobile USA is estimated to account for only about **[Begin Confidential Information]** **[End Confidential Information]** percent of business subscribers while AT&T's share of business subscribers is **[Begin Confidential Information]** **[End Confidential Information]** percent.[183]

125. T-Mobile USA also has been relatively unsuccessful in attracting data-intensive subscribers, instead attracting a disproportionate share of **[Begin Confidential Information]** **[End Confidential Information]** and **[Begin Confidential Information]** **[End Confidential Information]**subscribers. As shown in Table 2, data services account for only about **[Begin Confidential Information]** **[End Confidential Information]** percent of T-Mobile USA revenue, substantially less than the **[Begin Confidential Information]** **[End Confidential Information]** percent for AT&T.

126. T-Mobile USA's subscriber share has been declining somewhat in recent years among both contract and non-contract subscribers. AT&T's estimates indicate that T-Mobile USA's share of contract subscribers has **[Begin Confidential Information]** **[End Confidential Information]** percent in the fourth quarter of 2008 to **[Begin Confidential Information]** **[End Confidential Information]** percent in the fourth quarter of 2010. Among non-contract subscribers, T-

182. See Table 2.
183. See Table 2.

Mobile USA's share is estimated to have fallen from **[Begin Confidential Information]** **[End Confidential Information]** percent to **[Begin Confidential Information]** **[End Confidential Information]** percent over the same period.

Figure 6 [Begin Confidential Information]

[End Confidential Information]

127. Analysts attribute T-Mobile USA's declining share to past delays in upgrading its network from GSM to UMTS/HSPA/HSPA+ and the absence of plans to deploy LTE. Nearly three years ago, HSBC noted that T-Mobile USA "... is one of the last developed market operators to launch 3G services (as it was spectrum constrained until the 2006 AWS auctions). [...] [W]e believe it will eventually struggle to compete with larger and more technologically advanced rivals like Verizon Wireless and AT&T."[184] Credit Suisse noted more recently that "T-Mobile's delay in upgrading to 3G led to a rapid decline in the business."[185]

184. HSBC, "Deutsche Telekom," Dominik Klarmann and Madeleine King, August 14, 2008, p. 7-8.
185. Credit Suisse, "CS Telecom Services: The Time for Wireless Consolidation is Here," July 19, 2010, p. 10.

128. T-Mobile USA's lack of any clear path to providing LTE is likely to further limit its future competitive significance. Analysts recognize both that (i) LTE is critical to remaining a competitive supplier given the dramatic projected growth in demand for data services and (ii) that T-Mobile USA is poorly positioned to deploy these services. Oppenheimer, for example, states that "[w]e expect 4G to dominate the agenda for wireless carriers for the next 5-10 years ... 4G wireless networks will be built using LTE technologies which will have speeds that are at least 3x those of 3G and will be a major differentiator for the wireless carriers with good LTE coverage."[186]

129. At the same time, analysts recognize that T-Mobile USA does not currently have sufficient spectrum to provide LTE services. Credit Suisse notes that for T-Mobile USA to remain competitive in the U.S. market it will "require upgrading to LTE at some point. [...] T-Mobile will eventually have to upgrade to LTE; however, they don't have enough spectrum to manage the upgrade, and lack ready access to capital required to purchase spectrum ... T-Mobile will likely need more spectrum to cope with capacity required by HSPA+, even if they don't upgrade to LTE."[187] Credit Suisse further observes that "[s]ub declines may continue if competitors offer 4G and T-Mobile does not."[188]

130. T-Mobile USA's competitive position is probably best summarized in J.P. Morgan's recent comment that T-Mobile USA "is struggling for relevance."[189] Morgan Stanley has reached a similar conclusion, noting that T-Mobile USA's "pricing strategy is exposed at the low-end to challengers,

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186. Oppenheimer, "Sprint Nextel Reports of DT-S Negotiations over T-Mobile USA," March 8, 2011, pp. 2.
187. Credit Suisse, "CS Telecom Services: The Time for Wireless Consolidation is Here," July 19, 2010, p. 10-11.
188. Credit Suisse, "CS Telecom Services: The Time for Wireless Consolidation is Here," July 19, 2010, p. 15.
189. JP Morgan, "U.S. Telecom Services & Towers," January 13, 2011, p. 18.

such as Leap and Metro, while high ARPU subs are targeted by AT&T and Verizon's higher quality positioning."[190]

131. As the discussion above indicates, T-Mobile USA's competitive significance is likely to decline in the absence of the proposed transaction. As a result, its current subscriber share of roughly **[Begin Confidential Information]** **[End Confidential Information]** percent overstates its future competitive significance.

V. CONCERNS ABOUT PRICE INCREASES DUE TO UNILATERAL AND COORDINATED EFFECTS DO NOT APPLY GIVEN THE EXPANSION IN OUTPUT EXPECTED DUE TO THE PROPOSED TRANSACTION.

A. EVALUATION OF THE COMPETITIVE EFFECTS OF THE PROPOSED TRANSACTION MUST ACCOUNT FOR HOW THE TRANSACTION WILL LOWER THE HIGH COSTS FACED BY AT&T AND T-MOBILE USA IN EXPANDING CAPACITY AND OUTPUT.

132. As discussed above, AT&T and T-Mobile USA are facing capacity constraints or, equivalently, high costs of expanding output in many areas they serve. For wireless firms operating at or near capacity, the cost of serving additional customers without degrading the quality of service provided can include the cost of deploying new cell sites, moving traffic off the network using WiFi or similar technologies, redeploying spectrum to use more efficient technologies and/or adding new spectrum to the network. While wireless firms operating at or near capacity may be able to add subscribers without altering other aspects of their network, doing so to any material extent would lower service quality by generating higher rates of blocked and dropped calls and decreasing the speed of data services. Reductions in service quality are equivalent to an increase in the "quality-adjusted" price faced by subscribers.

190. Morgan Stanley, "Deutsche Telekom US Options – No Easy Way Out," January 10, 2011, p. 3.

133. As explained above, the proposed transaction will enable the merged firm to expand capacity or, equivalently, reduce the cost of expanding capacity and output by (i) expanding the number of areas in which spectrally-efficient LTE services will be deployed; (ii) increasing the amount of spectrum on which it will be deployed; (iii) creating a denser network with additional cells that increase aggregate capacity; (iv) increasing spectrum available to provide service by consolidating redundant network control functions; (v) increasing network capacity by consolidating less efficient GSM services and expanding spectrum dedicated to more efficient UMTS/HSPA/HSPA+ services; and (vi) increasing the efficiency of existing spectrum through "channel pooling" efficiencies.

134. The increase in the combined capacity of the AT&T and T-Mobile USA networks that will result from the proposed merger will lower the cost of serving additional subscribers and thus create incentives to expand output and lower prices relative to the levels expected in the absence of the transaction. Especially in light of the large projected increases in demand for data services documented above and the merged firm's business plans discussed below, it is reasonable to conclude that the merged firm would find it profitable to utilize its increased capacity to increase output above the levels expected in the absence of the proposed transactions.

135. AT&T's post-merger business plans are to expand output. David Christopher, AT&T's Chief Marketing Officer, also describes the importance of AT&T expanding capacity to enable the firm to increase sales and maintain competitive pressure against other wireless carriers through continued innovation and improved quality. As he explains, the increased quality of service resulting from the proposed transaction increases AT&T's ability to provide high quality and innovative services, which both increase network utilization by existing customers and attracting new ones.[191] Similarly, John Donovan, AT&T's Chief Technology Officer, describes in his declaration a variety of the innovations and

191. Christopher Declaration, ¶80.

services AT&T is planning on offering in the future assuming that it has the "spectrum assets necessary to meet consumers' soaring demand for mobile broadband." However, he cautions that "virtually all of the most exciting and innovative possibilities [being pursued by AT&T] over the near and medium term will require increased network capacity."[192]

136. AT&T's goals are consistent with the large investments it has made over recent years to upgrade its network. Between 2008 and 2010, AT&T invested in improving and expanding its wireless network as well as **[Begin Confidential Information]** **[End Confidential Information]** on additional spectrum purchases.[193]

B. TYPICAL "UNILATERAL EFFECTS" CONCERNS DO NOT APPLY TO THE PROPOSED TRANSACTION GIVEN THE CAPACITY CONSTRAINTS FACED BY AT&T AND T-MOBILE USA AND THE INCREASED CAPACITY RESULTING FROM THE TRANSACTION.

137. It is well recognized that mergers of firms that produce differentiated products can give rise to concerns that the merged firm will find it profitable to increase price unilaterally (e.g., without actions by any other firm).[194] However, if one misapplies standard unilateral effects models based on the assumptions that output can be readily expanded at constant cost and that there is no expansion of capacity resulting from a merger, then one can obtain misleading results about the likelihood that the proposed merger will result in higher prices in the wireless industry.

138. Concerns about "unilateral effects" of mergers are based on the observation that the producer of a differentiated good or service that raises price will lose some customers to rival firms that produce imperfect substitutes. The extent of such losses limits the amount that a firm can profitably raise price. A merger between firms that produce substitutable differentiated products implies that

192. Donovan Declaration, ¶¶15-16.
193. AT&T Annual Reports, 2010, p. 71, 2008, p. 60 and AT&T estimates.
194. See, for example, Joseph Farrell and Carl Shapiro, "Antitrust Evaluation of Horizontal Mergers: An Economic Alternative to Market Definition," February 2010.

some customers that otherwise would be lost to rivals following a price increase will be recaptured by the merger partner's product. This increases the merging firms' incentive to raise price relative to that in the absence of the merger. The unilateral incentive to raise price is generally greater when the merging brands are closer substitutes, which implies that a larger share of sales lost as the result of a price increase is recaptured by the merged brand. The unilateral incentive to raise price is also affected by the margin earned on the recaptured sales. The incentive of a merged firm to raise price is generally greater the larger the incremental profit generated by a recaptured customer.

139. Most analyses of unilateral effects are done under the assumption that firms face no capacity constraints.[195] If this assumption does not hold and if instead the merger increases the combined capacity of the firm, then it is consistent with economic theory that the merged firm increases its profits by expanding output. To see this point, consider a simple example in which an industry consists of only two firms which are both operating at capacity (e.g., facing a vertical marginal cost curve). If demand is sufficiently strong, the merged firm will produce exactly the same industry output as was produced pre-merger. Moreover, if the merger allows an expansion of capacity, as here, then industry output can rise post-merger and prices fall.[196] Exactly the same situation can occur with rising marginal cost curves replacing the vertical marginal cost curve.[197]

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195. The FCC's Chief Economist Jonathan Baker noted in a recent paper that that "[i]n practice, unilateral effects most commonly arise from mergers among firms that sell differentiated products without binding capacity constraints." Jonathan B. Baker, "Merger Simulation in an Administrative Context," February 22, 2011, p. 5 (available at http://ssrn.com/abstract= 1790943).

196. It is also possible that when firms face capacity constraints, the incentive to restrict output as a result of a merger can outweigh the incentive to expand output that results from merger-related reductions in marginal cost. Thus, neither this example nor our analysis would provide support for the view that a merger to monopoly in this wireless industry would be desirable. In light of the structure of the wireless industry that will remain after this merger, and AT&T's incentives and plans to use the expanded capacity made possible by the transaction to improve service to subscribers and expand output, any merger-related incentive to restrict output is outweighed by the merger-related incentive to expand output due to reductions in marginal costs. As this

140. Therefore, it would be incorrect to conclude that in this industry unilateral effects analysis would predict that after the transaction prices will rise and output will fall. Concerns about unilateral effects are mitigated or eliminated when (i) firms face rising marginal costs of expanding output; (ii) firms face strong demand (so firms operate on the steep or vertical portion of the marginal cost curve); and (iii) mergers result in synergies that increase capacity or, equivalently, reduce marginal costs of expanding output. As documented in the previous sections, these are precisely the circumstances that arise in the proposed transaction: (i) both AT&T and T-Mobile USA face sharply rising marginal costs of expanding output and are operating at or near capacity; (ii) demand is projected to continue to expand rapidly, with the FCC acknowledging that the industry faces significant spectrum constraints; and (iii) the proposed merger promises to result in engineering-based synergies that will increase network capacity.

141. If one misapplies standard models based on the assumptions that output can be readily expanded at constant cost and that there is no expansion of capacity resulting from a merger, then one can obtain misleading results about the likelihood that the proposed merger will result in higher prices in the wireless industry. This is also true if one uses the Upward Pricing Pressure (UPP) framework referenced in the recent revision to the Horizontal Merger Guidelines, which is used by some as an initial approximation of a merger's unilateral effect on the incentive to raise price. The two key components of UPP are the "diversion ratio" and the "price cost margin." The diversion ratio reflects the amount of sales that would be diverted to a merger partner's brand. The price/cost margin reflects the

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suggests, the facts of each situation, including the business incentives and plans, need to be examined in analyzing any merger.

197. For example, even a monopolist that realizes an outward shift in its marginal cost curve will expand output and lower price.

incremental profitability of subscribers that would be recaptured as a result as result of a merger-related price increase.

142. There are a number of reasons that the standard UPP framework cannot be applied to this transaction. Perhaps most importantly, price/cost margins used in UPP and other merger simulations models to approximate the profitability of recaptured customers are often calculated based on accounting measures of *average variable costs*. However, the underlying economic logic of unilateral effects models depends on the *marginal* cost of serving additional subscribers, which is likely to be much higher than *average variable costs* when firms are operating at or near capacity. The marginal cost of serving additional wireless subscribers can include costs associated with deployment of new cell sites, deployment of WiFi facilities to offload traffic, acquisition of new spectrum, etc. The use of accounting data on average variable costs instead of economic data on marginal costs will overstate the profitability of diverted sales and thus overstates the "upward pricing pressure" from the proposed transaction.

143. The standard UPP framework also does not readily account for the expansion in capacity that will result from a merger. As discussed above, the proposed transaction will expand capacity and lower the cost of serving new customers, creating incentives for the merged firm to increase output. The increase in output results in an unambiguous benefit by lowering prices to consumers relative to those that would be observed in the absence of the proposed transaction.

144. In addition, the standard UPP framework would not account for AT&T's permitting consumers on existing T-Mobile USA pricing plans to continue to obtain service under those plans. As a result, a substantial group of subscribers would have no prospect of facing a merger-related price increase.[198]

198. New subscribers that might have selected the T-Mobile USA brand in the absence of the proposed transaction instead will continue to have access to their next best alternative as well as access to an AT&T network capable of delivering higher quality services than otherwise would

145. In addition to the role of capacity constraints and expanded capacity in mitigating concerns about unilateral effects, the substantial differences in the characteristics of AT&T and T-Mobile USA subscribers further reduce this concern. As noted above, concerns about unilateral effects are greatest when the merging firms produce products that are close substitutes. However, the differences in subscriber characteristics summarized in Table 2 above indicate that AT&T and T-Mobile USA are not especially close substitutes: (i) data services account for a substantially smaller share of data revenue for T-Mobile USA compared to AT&T; (ii) non-contract subscribers are more important for T-Mobile USA than for AT&T; (iii) T-Mobile USA customers are typically **[Begin Confidential Information]** **[End Confidential Information]** and have **[Begin Confidential Information]** **[End Confidential Information]** than AT&T customers; and (iv) enterprise customers account for a larger share of AT&T wireless revenue compared to T-Mobile USA.

C. TYPICAL "COORDINATED EFFECTS" CONCERNS DO NOT APPLY TO THE PROPOSED TRANSACTION GIVEN THE CAPACITY CONSTRAINTS FACED BY AT&T AND T-MOBILE USA, THE EXPANSION OF CAPACITY CREATED BY THE MERGER, AS WELL AS OTHER INDUSTRY CHARACTERISTICS.

146. It is well recognized that mergers give rise to the concern that the reduction in the number of firms in the industry may facilitate "coordination" in pricing and output decisions.[199] "Coordinated effects" concerns reflect the view that a reduction in the number of firms in an industry reduces the likelihood that a firm will deviate from coordinated pricing and output decisions because their actions will be detected and punished by rivals. The increased likelihood of coordination increases the likelihood of higher prices.

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be available.

199. See, for example, Dennis Carlton and Jeffrey Perloff, Modern Industrial Organization (4th Edition), Chapters 5 (cartels), 6 (oligopolies) and 19 (antitrust policy).

147. Concerns about coordinated effects are reduced when firms operate at or near capacity and face strong demand, just as these circumstances limit concerns about unilateral effects. Moreover, concerns about the impact of a merger on coordinated interactions between firms are reduced in industries in which firms vary with respect to the costs of expanding output. A merger which lowers AT&T/T-Mobile USA's cost of expanding capacity provides incentives for it to expand output. At the same time, other firms in the industry are likely to face much different costs associated with expanding output given their varying spectrum holdings and subscriber characteristics. These differences create significant differences among firms with respect to their incentive to coordinate their actions with other firms in the industry.

148. Similarly, diversity of firms and business strategies in the wireless industry further reduces concerns about the proposed transaction resulting in coordinated effects. The FCC's traditional coordination analysis concerns focus on the following industry factors: (i) the homogeneity of firms and services, with greater homogeneity leading to increased risks of coordinated effects; (ii) the transparency of pricing information, with greater transparency increasing concerns about coordinated effects; and (iii) the scope of technological change, with more rapid changes implying greater coordination difficulties among firms due to their divergent long-term interests.[200]

149. Evaluation of each of these factors highlights the difficulty of coordinated interaction in the wireless industry. *First*, as discussed in Section IV above, wireless firms today have highly diverse business strategies. Some, including AT&T and Verizon Wireless, focus principally on contract subscribers served through multi-year contracts. Others, including MetroPCS and Leap, focus almost exclusively on non-contract subscribers served on a month-to-month basis. Others, including Sprint and

200. See, for example, FCC, Memorandum Opinion and Order and Declaratory Ruling, Verizon Wireless/ALLTEL, FCC 08-258, November 10, 2008, ¶90.

T-Mobile USA, operate somewhere in between. Differences among carriers extend to pricing strategies with different firms (such as MetroPCS and Leap) focusing on plans that provide unlimited voice and data services; while carriers such as Verizon Wireless, Sprint Nextel and T-Mobile USA offer unlimited data services but a range of plans with different "buckets" of voice minutes and texts. AT&T, however, offers tiered pricing for data services for new customers along with different buckets of voice minutes and texts. There are further differences in carriers' interests due to their mix of enterprise/non-enterprise customers and the mix of subscribers with respect to data usage.

150. *Second*, the large number of multi-dimensional service plans available from each carrier means that pricing is complex, further reducing concerns about coordinated effects. Each carrier offers multiple plans that involve different numbers of minutes and texts at different price points and plans differ across carriers with respect to the availability of "free" night and weekend calling (that does not count against plan minutes); "free" on-net calling; the availability of family plans which permit additional lines at reduced rates; as well as the availability and size of handset subsidies. Firms also differ with respect to a variety of other factors including the size of termination fees, roaming coverage, international rates, service quality, etc. Coordination is further complicated by the fact that carriers do not publish information on the number of subscribers that adopt various plans, making it difficult for carriers to monitor their rivals' activities.

151. *Third*, the rapid and on-going changes in wireless technology reduce concerns that the proposed transaction will result in coordinated effects. Changes in technology and services that can be provided over wireless networks create strong incentives for firms to be early providers of new services. As mentioned above, AT&T is currently promoting its service that enables subscribers to simultaneously transmit voice and data. Customers attracted by new technologies and services can persist over time, increasing coordination difficulties across firms. At the same time, as discussed above, there are